



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/765,194 | 01/28/2004 | Hisashi Ono | AISI.0099 | 1125 |

7590 12/28/2005

REED SMITH LLP
Suite 1400
3110 Fairview Park Drive
Falls Church, VA 22042

| |
|----------|
| EXAMINER |
|----------|

SCHNEIDER, CRAIG M

| | |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

3753

DATE MAILED: 12/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|---------------------------------------|-------------------------------------|--|
| Office Action Summary | Application No. 10/765,194 | Applicant(s) ONO, HISASHI | |
| | Examiner Craig M. Schneider | Art Unit 3753 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 January 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>1/28/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

The disclosure is objected to because of the following informalities:

On page 3, paragraph 10, line 1; "cylindrical member is a plug" should read --
cylindrical member has a plug--.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 6 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. In the specification the cylindrical member is the hole in which the relief valve is placed and Claim 6 is redefining the hole to be a plug.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1-4 and 8-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Morita (4,293,289).

Morita discloses a relief valve mechanism (34) for an oil pump (20) comprising a body having a first hole (area to the right of 12a), a spring (14) housed in the body and adapted to apply biasing force to a relief valve in response to contraction of the spring, a first opening (hole at 12a) connected to the first hole of the body, the relief valve (32) adapted to close the first opening in response to the biasing force of the spring and adapted to open the first opening against the biasing force in response to pressure of fluid from the oil pump applied to one end of the valve, and means for sensing a temperature positioned at the spring (col. 4, lines 47-58).

Regarding claim 2, Morita further discloses a relief valve mechanism for an oil pump wherein the means for sensing the temperature is altered in an axial direction of the spring.

Regarding claim 3, Morita further discloses a relief valve mechanism for an oil pump wherein the means for sensing the temperature includes a cylindrical member (12) with at least a bottom(13a), a retainer (cylinder of 32) slidably positioned in a second hole of the cylindrical member, and a thermally adapted material enclosed by the retainer and the second hole (col. 4, lines 47-58).

Regarding claim 4, Morita further discloses a relief valve mechanism for an oil pump wherein the means for sensing the temperature is positioned at the spring at the left side of the valve as seen in Figure 2.

Claim Rejections - 35 USC § 103

Art Unit: 3753

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morita as applied to claim 1 above, and further in view of Schwab (3,664,129).

Morita discloses all the features of the claimed invention except that the means for sensing the temperature is positioned at the spring at an opposite side to the valve. Morita uses temperature sensitive material in the valve head (32) to move spring seat (30) to adjust the bias in response to temperature. Regarding claim 6, Morita discloses using a plug (13) at the end of the valve in order to keep the valve member inside the cylindrical member (col. 4, lines 23-24). Schwab discloses a means for sensing the temperature (112) positioned at the spring (102) at the opposite side of the valve (100) that is being biased closed as seen in Figure 8 (col. 7, lines 68-70).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to relocate the temperature sensing means of Morita from the valve head to the other end of the spring as taught by Schwab, in order to reduce the complexity of the valve member.

Claim 7 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morita as applied to claim 3 above, and further in view of Schwab (3,664,129).

Art Unit: 3753

Morita discloses all the features of the claimed invention except that the thermally adapted material includes a thermal wax. Schwab discloses utilizing a thermally adapted material on a relief valve(56a), which is a thermal wax (112).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the thermal wax of Schwab in the valve member of Morita, in order to have a thermal expansive material that can easily fit inside the retainer.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Lovekin et al. (1,944,518) and Rutledge et al. (3,403,854) disclose temperature and pressure relief valves. Kazaoka (6,543,476) discloses an oil pump relief valve. Chamot et al. (US2001/0010210) disclose a regulating valve that utilizes a thermal compensator.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Craig M. Schneider whose telephone number is (571) 272-3607. The examiner can normally be reached on M-F 8:30 -5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Hepperle can be reached on (571) 272-4913. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3753

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CMS *CMS*
December 22, 2005


STEPHEN M. HEPPERLE
PRIMARY EXAMINER
ART UNIT 347